

FEB 10 2006

Substitute for Form 1449B/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

				<i>Complete if Known</i>
Application Number	10/541,013			
Filing Date	June 28, 2005			
First Named Inventor	Eric Henderson			
Group Art Unit	1641			
Examiner Name	Unknown			
Attorney Docket Number	016348-9048-US00			

Sheet

1

of

28

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RJ	<u>"Microbeam Mass Spectrometry"</u> Chemical Science and Technology Laboratory, Surface and Microanalysis Science Division http://www.cstl.nist.gov/div837/Divisoin/expertise/ions/masspec1.htm 7/18/2002.
/	Abstracts of Papers Part I, 214 th "Abstract 027" ACS National Meeting American Chemical Society, September 1997, 2 pgs.
	ALLISON, D., et al., "Direct atomic force microscopy imaging of EcoRI endonuclease site specifically bound to plasmid DNA molecules" <i>PNAS USA</i> , 1996, 93:8826-8829.
	ALLISON, D., et al., "Mapping Individual Cosmid DNAs by Direct AFM Imaging" <i>Genomics</i> , 1997, 41:379-384.
	ALVES, et al., "Atomic scale imaging of alkanethiolate monolayers at gold surfaces with atomic force microscopy" <i>J. Am. Chem. Soc.</i> , February 1992, 114(4):1222-1227.
	AMRO, et al., "Patterning surfaces using tip-directed displacement and self-assembly" <i>Langmuir</i> , 2000, 16:3006-3009.
	ANWANDER, et al., "Surface characterization and functionalization of MCM-41 silicas via silazane silylation" <i>J. Phys. Chem. B.</i> , 2000, 104:3532-3544.
	ARNTZ, et al., "Label-free protein assay based on a nanomechanical cantilever array" <i>Nanotechnology</i> , 14 (2003) 86-90.
A	AUSUBEL, F.M., et al. "Current Protocols in Molecular Biology" 1993 ed. Vol. 1&2, 1993, Green Publishing Associates and Wiley-Interscience.

Examiner Signature		Date Considered	12/10/06
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<i>CH</i>		BAILEY, C.P., <i>et al.</i> , Cationic oligonucleotides can mediate specific inhibition of gene expression in Xenopus oocytes" <i>Nuc. Acids Res.</i> , 1998, 26(21):4860-4867.			
		BAIN, <i>et al.</i> , "Modeling organic surfaces with self-assembled monolayers" <i>Agnew. Chem. Int. Ed. Engl.</i> , 1989, 28(4):506-512.			
		BASELT, D.R., <i>et al.</i> , "A biosensor based on magnetoresistance technology" <i>Biosens. Bioelectorn</i> , 1998, 13(7-8):731-739.			
		BEDOUELLE, H., "Reagentless fluorescent Immunosensors" <i>Antibody Engineering</i> , IBC's 13 th International Conference, December 2, 2002.			
		BELAUBRE, P. <i>et al.</i> , "Fabrication of biological microarrays using microcantilevers" <i>Applied Physics Letters</i> , 5 May 2003, 82(18):3122-3124.			
		BENSIMON, A., <i>et al.</i> , "Alignment and sensitive detection of DNA by a moving interface" <i>Science</i> , 1994, Sep 30; 265(5181):2096-2098 [PMID 7522347] Abstract.			
		BERGGREN, <i>et al.</i> , "Microlithography by using neutral metastable atoms and self-assembled monolayers" <i>Science</i> , September 1995, 269(5228):1255-1257.			
		BERNARD, <i>et al.</i> "Printing patterns of proteins" <i>Langmuir The ACS Journal of Surfaces and Colloid</i> , April 1998, 14(9):2225-2229.			
<i>A</i>		BINGGELI, <i>et al.</i> , "Influence of capillary condensation of water on nanotribology studied by force microscopy" <i>Appl. Phys. Lett.</i> , July 1994, 65(4):415-417.			

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<i>RE</i>		BINNING, <i>et al.</i> , "Surface studies by scanning tunneling microscopy" <i>Phys. Rev. Lett.</i> , 1982, 49(1):57-61.			
		BINNING, G., <i>et al.</i> , "Atomic force microscope" <i>Phys. Rev. Lett.</i> , 1986, 56(9):930-933.			
		BISHOP, <i>et al.</i> , "Self-assembled monolayers: recent developments and applications" <i>Colloid & Interface Science</i> , February 1996, 1:127-136.			
		BOTTOMLEY, L., "Scanning probe microscopy" <i>Anal. Chem.</i> , June 1998, 70(12):425R-475R.			
		BRANDOW, S., <i>et al.</i> , "Metal pattern fabrication using the local electric field of conducting atomic force microscope probe" <i>J. Vac. Sci. Technol.</i> , May/June 1997, 15(3):1455-1459.			
		BRENNER, S., <i>et al.</i> , "Gene expression analysis by massively parallel signature sequencing (MPSS) on microbead arrays" <i>Nat. Biotechnol.</i> 2000, June 18(6):630-634, 2000.			
		BRODY, E., and Gold, L., "Aptamers as therapeutic and diagnostic agents" <i>Molecular Biotechnology</i> , 2000, 74:5-13.			
		BRUCKBAUER, <i>et al.</i> , "Writing with DNA and Protein Using a Nanopipet for Controlled Delivery" <i>JACS</i> , 2002, A-B.			
<i>YD</i>		BULYK, <i>et al.</i> , "Quantifying DNA-protein interactions by double-stranded DNA arrays" <i>Nature Biotechnology</i> , June 1999, 17:573-577.			

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<i>PP</i>		BUSCH, K.L., "Desorption Ionization Mass Spectrometry," <i>J. Mass Spectrometry</i> (1995) 30:233-240			
		BUSTAMANTE C., <i>et al.</i> , "Circular DNA Molecules Imaged in Air by Scanning Force Microscopy" <i>Biochemistry</i> , 1992, 31:22-26			
		BUSTAMANTE, C., <i>et al.</i> , "Biochemical and structural applications of scanning force microscopy" <i>Curr. Opin. Struct. Biol.</i> , 1994 4(5):750-760.			
		CARR, <i>et al.</i> , "High-selectivity pattern transfer process for self-assembled monolayer electron beam resists" <i>J. Vac. Sci. Technol.</i> , May/June 1997, 15(3):1446-1450.			
		CHENG, <i>et al.</i> , "Preparation and hybridization analysis of DNA/RNA from <i>E. coli</i> on microfabricated bioelectronic chips" <i>Nature Biotechnology</i> , 1998, 16:541-546			
		CHRISSEY <i>et al.</i> , "Fabrication of patterned DNA surfaces" <i>Nucleic Acids Research</i> , (10/1996)24(15):3040-3047.			
		CLARK, M.W. <i>et al.</i> , "Nanotechnology tools for functional proteomics analysis" <i>American Biotechnology Laboratory</i> , March 2001, 16-18.			
		COLAS, <i>et al.</i> , "Genetic selection of peptide aptamers that recognize an inhibit cyclin-dependent kinase 2", <i>Nature</i> , April 1996 380(11):548-550.			
<i>AK</i>		COLLINS, <i>et al.</i> , "Engineering Carbon Nanotubes and Nanotube Circuits Using Electrical Breakdown" <i>Science</i> , April 2001, 292(5517):706-709.			

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<i>RL</i>		COLLINS, <i>et al.</i> , "Nanotube Device" <i>Science</i> , 3 October 1997, 278:100-103.			
		COLVIN, <i>et al.</i> "Semiconductor nanocrystals covalently bound to metal surfaces with self-assembled monolayers" <i>J. Am. Chem. Soc.</i> , 1992, 114:5221-5230.			
		CUI, Y, <i>et al.</i> , "Nanowire nanosensors for highly sensitive and selective detection of biological and chemical species" <i>Science</i> , 2001, 293, 1289-1292.			
		DAI, H, <i>et al.</i> , "Controlled chemical routes to nanotube architectures" <i>Physics and Devices, J. Phys. Chem B</i> , 1999, 103:11246-11255.			
		DAI, H, <i>et al.</i> , "Probing electrical transport in nanomaterials: conductivity of individual carbon nanotubes" <i>Science</i> , 1996, 272(5261):523-526.			
		DAMMER, <i>et al.</i> , "Binding strength between cell adhesion proteoglycans measured by atomic force microscopy" <i>Science</i> , 1995, 267:1173-1175.			
		DAMMER, <i>et al.</i> , "Specific antigen/antibody interactions measured by force microscopy" <i>Biophys. J.</i> , 1996, 70:2437-2441.			
		DELAMARCHE, E., "Immobilization of antibodies on a photoactive self-assembled monolayer on gold," <i>Langmuir</i> (1996) 12:1997-2006			
<i>AV</i>		DING, Y., OKA, T., <i>et al.</i> , "Near-field stimulated TOF nanometric surface mass spectroscopy: characterization of Nano-localized surfaces" Joint International Meeting - 200th Meeting of the Electrochemical Society, Inc., 52nd Annual Meeting of the International Society of Electrochemistry, San Francisco, California (2001).			

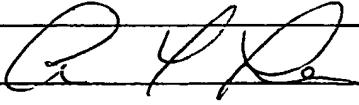
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		DING, Y., RUGGERO, M. <i>et al.</i> , "Development of UHV-STM/TOF hybrid mass analyzer system for nano-characterization of metal silicide surfaces" 198th Meeting of the Electrochemical Society, Phoenix, Arizona (2000).			
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		DUBOIS, L. <i>et al.</i> , "Synthesis, Structure, and Properties of Model Organic Surfaces" <i>Annu. Rev. Phys. Chem.</i> , 1992, 43:437-463.			
		DURBIN, S., FEHER, G., "Protein crystallization" <i>Annual Review of Phys Chemistry</i> . 1996, 47:171-204.			
		FALVO, M.R., <i>et al.</i> , "Bending and buckling of carbon nanotubes under large strain" <i>Nature</i> , 1997, 389:582-584.			
		FAN, S., <i>et al.</i> , "Self-oriented regular arrays of carbon nanotubes and their functional devices" <i>Science</i> , 1999, 283, 512.			

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		FANG, et al., "Membrane Protein Microarrays" <i>JACS</i> , 2002, 124(11):2394-2395.			
		FARAJIAN, A.A., et al., "Nonlinear Coherent Transport Through Doped Nanotube Junctions" <i>Physical Review</i> , June 21, 1999, 82(25):5084-5087.			
		FEIGON, J. "DNA triplexes, quadruplexe, and aptamers" <i>Clin. Chem.</i> , 1994, 40(4):647-647.			
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		FRISBIE, C.D., et al., "Functional group imaging by chemical force microscopy" <i>Science</i> , 1994, 265:2071-2074.			
		FRITZ, J., et al., "Translating biomolecular recognition into nanomechanics" <i>Science</i> , 2000, 316-318.			
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<i>DD</i>		FRITZSCHE, W., <i>et al.</i> , "Chicken Erythrocyte Nucleosomes Have a Defined Orientation along the Linker DNA-A Scanning Force Microscopy Study" <i>Scanning</i> , 1997, 19:42-47.			
		FRITZSCHE, W., <i>et al.</i> , "Mapping elasticity of rehydration metaphase chromosomes by scanning force microscopy" <i>Ultramicroscopy</i> , 1997, 69:191-200.			
		FRITZSCHE, W., <i>et al.</i> , "Ribosome substructure investigated by scanning force microscopy and image processing" <i>Journal of Microscopy</i> , 1998, 189, Pt 1, 50-56.			
		FUHRER, <i>et al.</i> , "Crossed Nanotube Junctions" <i>Science</i> , 21 April 2000, 288:494-497.			
		FUJIHIRA, <i>et al.</i> , "Effect of capillary force on friction force microscopy: a scanning hydrophilicity microscope" <i>Chemistry Letters</i> , July 1996, 7:499-500.			
		GANTZER, C. et al., "Detection of infectious enteroviruses, enterovirus genomes, somatic coliphages, and bacteroides fragilis phages in treated wastewater," <i>Appl. Environ. Microbiol.</i> (1998) 64:4307-4312			
		GAUNTT, C. and HUBER, S., <i>Front Biosci.</i> (2003) 8:E23			
		GILLEN, G., BENNETT, J., <i>et al.</i> , "Molecular imaging secondary ion mass spectrometry for the characterization of patterned self-assembled monolayers on silver and gold" <i>Anal. Chemistry</i> , 1994, 66:2170-2174.			
<i>AG</i>		GIRALUT, S., CHASSAING, G. <i>et al.</i> , "Coupling of MALDI-TOF mass analysis to the separation of biotinylated peptides by magnetic streptavidin beads" <i>Anal. Chemistry</i> 1996, 68:2122-2126.			

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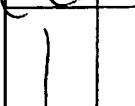
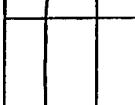
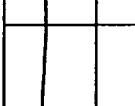
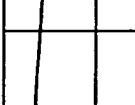
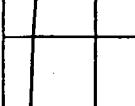
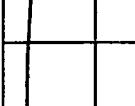
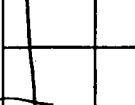
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		GRABAR, et al., "Preparation and characterization of Au colloid monolayers" <i>Anal. Chem.</i> , 1995, 67(4):735-743.			
		HAAB, et al., "Protein microarrays for highly parallel detection and quantitation of specific proteins and antibodies in complex solutions" <i>Genome Biology</i> , 2001, 2(2)0004.1-0004.13.			
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		HANSMA, H.G., et al., "Recent advances in atomic force microscopy of DNA" <i>Scanning</i> 1993, 15(5):296-9.			
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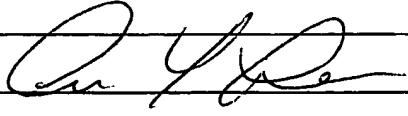
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Substitute for form 1449B/PTO				<i>Complete if Known</i>	
				Application Number	10/541,013
				Filing Date	June 28, 2005
				First Named Inventor	Eric Henderson
				Group Art Unit	1641
				Examiner Name	Unknown
Sheet	10	of	28	Attorney Docket Number	016348-9048-US00

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	HENDERSON, E., "Imaging of Living Cells by Atomic Force Microscopy" <i>Progress in Surface Science</i> , May 1994, 46(1):39-60.				
	HENDERSON, E., "Molecular force detection and spectroscopy with the atomic force microscope" <i>Science Progress</i> , 1998, 81(2):141-151.				
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<i>RL</i>	HOH, J.H., <i>et al.</i> , "Atomic force microscopy and dissection of gap junctions" <i>Science</i> , 1991, 1405-1408.				
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<i>✓</i>	HU, <i>et al.</i> , "Imaging the condensation and evaporation of molecularly thin films of water with nanometer resolution" <i>Science</i> , 1995, 268(5208):267-269.				

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<i>A</i>		JONES, V., <i>et al.</i> , "Microminiaturized Immunoassays Using Atomic Force Microscopy and Compositionally Patterned Antigen Arrays 66" <i>Anal. Chem.</i> , 1998, 70(7):1233-1241.			

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<i>EL</i>	KARPOVICH, <i>et al.</i> , "Direct measurement of the adsorption kinetics of alkanethioilate self-assembled monolayers on microcrystalline gold surface" <i>Langmuir</i> , 1994, 10:3315-3322.				
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		LIU, <i>et al.</i> , "Nanofabrication of self-assembled monolayers using scanning probe lithography" <i>Acc. Chem. Res.</i> , 2000, 33(7):457-466.			
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<i>EP</i>		LÜTHI, <i>et al.</i> , "Parallel nanodevice fabrication using a combination of shadow mask and scanning probe methods" <i>Applied Physics Letters</i> , 1999, 75(9):1314-1316.			
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<i>De</i>		MARSH, T.C., <i>et al.</i> , "G-wires: Self-assembly of a telomeric oligonucleotide, d(GGGGTTGGGG), into large superstructures" <i>Biochemistry</i> 1994, 33:10718-10724.			
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<i>E</i>		MINNE, et al., "Centimeter scale atomic force microscope imaging and lithography" <i>Applied Physics Letters</i> , 1998, 73(12):1742-1744.			
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				Application Number	10/541,013
				Filing Date	June 28, 2005
				First Named Inventor	Eric Henderson
				Group Art Unit	1641
				Examiner Name	Unknown
Sheet	18	of	28	Attorney Docket Number	016348-9048-US00

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		MURRAY, et al., "Atomic force microscopy of biochemically tagged DNA" <i>Proc., Natl. Acad. Sci.</i> , 1993, 90:3811-3814.			
		MUSIL, C., "Nanostructuring of gold electrodes for immunosensing applications: <i>J. Vac. Sci. Technol. B.</i> , 1995, 13(6):2781-2786.			
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		PAWELETZ, <i>et al.</i> , "Reverse phase protein microarrays which capture disease progression shoe activation of pro-survival pathways at the cancer invasion front" <i>Oncogen</i> , 2001, 20:1981-1989.			
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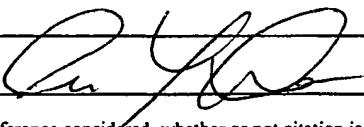
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		RANKIN, P.C. WILSON, A.T. "The Surface Chemistry of the Mica-Aluminum-Sulfate System" <i>Journal of Colloid and Interface Science</i> , (1969) 30(3):277-282.			
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		SCHEINA, et al., "Parallel human genome analysis : Microarray-based expression monitoring of 1000 genes" <i>PNAS USA</i> , 1996, 93:10614-10619.			
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		SNOW, et al., "High speed patterning of a metal silicide using scanned probe lithography" <i>Applied Physics Letters</i> , 1999, 75(10):1476-1478.			
<i>✓</i>		SOH, H., et al., "Integrated nanotube circuits: controlled growth and ohmic contacts to single-walled-carbon nanotubes" <i>Appl. Phys. Lett.</i> , 1999, 75(5): 627-629.			

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<i>EL</i>		SONDAG-HUETHORST, <i>et al.</i> , "Generation of electrochemically deposited metal patterns by means of electron beam (nano)lithography of self-assembled monolayer resists" <i>Appl. Phys. Lett.</i> 1994, 64(3):285-287.			
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<i>EL</i>		VESENKA, J. <i>et al.</i> , "A substrate preparation for reliable imaging of DNA molecules with the scanning force microscope" <i>Ultramicroscopy</i> , 1992, 42-44:1243-1249.			
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<i>EH</i>	WANG, <i>et al.</i> , "Nanometer scale patterning and pattern transfer on amorphous Si, crystalline Si, and SiO ₂ surfaces using self-assembled monolayers" <i>Appl. Phys. Lett.</i> , 1997, 70(12):1593-1595.				
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Examiner Signature	<i>A. Henderson</i>	Date Considered	12/10/06
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				Application Number	10/541,013
				Filing Date	June 28, 2005
				First Named Inventor	Eric Henderson
				Group Art Unit	1641
				Examiner Name	Unknown
Sheet	27	of	28	Attorney Docket Number	016348-9048-US00

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS					
Examiner Initials		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.			
		WONG, S., <i>et al.</i> , "Functionalization of carbon nanotube AFM probes using tip-activated gases" <i>Chem Physics Letters</i> , 1999, 306:219-225.			
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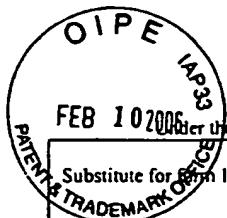
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<i>ER</i>		YAN, <i>et al.</i> "Patterning a performed, reactive SAM using microcontact printing" <i>J. Am. Chem. Soc.</i> , 1998, 120:6179-6180.			
		YAN, <i>et al.</i> , "Patterning thin films of poly(ethylene imine) on a reactive SAM using microcontact printing" <i>Langmuir</i> , 1999, 15:1208-1214.			
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<i>ER</i>		ZHU, <i>et al.</i> , "Global Analysis of Protein Activities Using Proteome Chips" <i>Science</i> , September 2001, 293(14):2101-2105.			

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Examiner Initials	U.S. Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document
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✓	5,519,212	Elings et al.	5/21/1996

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		5,571,639	Hubbell et al.	11/5/1996
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<i>J</i>		5,866,434	Massey et al.	2/2/1999

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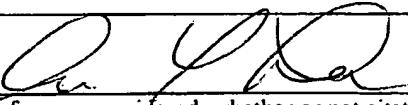
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U.S. PATENT DOCUMENTS				
Examiner Initials	U.S. Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document	
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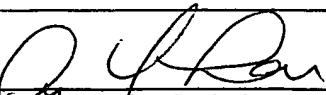
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Sheet	5	of	7	Attorney Docket Number	016348-9048-US00
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Examiner Name	Unknown

U.S. PATENT DOCUMENTS

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Examiner Initials	Country Code	Foreign Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document	Translation	English Abstract
<i>Patent Office</i>	JP	8094646	SHIMADZU CORP	4/12/1996		
<i>Patent Office</i>	JP	7027771	HITACHI LTD.	1/31/1995		

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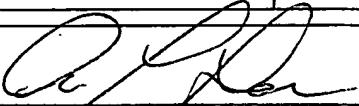
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	WO	03/001633	NORTHWESTERN UNIVERSITY	1/3/2003		

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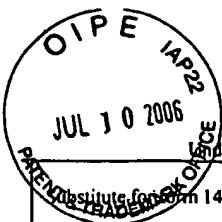
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<i>JL</i>	WO	03/048314	MIRKIN	6/12/2003		
<i>JL</i>	WO	03/052514	NORTHWESTERN UNIVERSITY	6/26/2003		

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(use as many sheets as necessary)

				<i>Complete if Known</i>
Application Number				10/541,013
Filing Date				June 28, 2005
First Named Inventor				Eric Henderson
Group Art Unit				1641
Examiner Name				Unknown Lava
Sheet	1	of	1	Attorney Docket Number 016348-9048-US00

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
EP		"FluoSpheres Fluorescent Microspheres – Product Information," Molecular Probes, Invitrogen Detection Technologies (2005) retrieved from the Internet: http://probes.invitrogen.com/media/pis/mp05000.pdf (XP-002378381)
CH		HOWLAND, R. et al., "A Practical Guide to Scanning Probe Microscopy," Thermomicroscopes (2002) retrieved from Internet: http://web.mit.edu/cortiz/www/AFMGallery/PracticalGuide.pdf (XP-002377197)
LP		LI, S. et al., "Regression of tumors by IFN- α electroporation gene therapy and analysis of the responsible genes by cDNA array," Gene Therapy (2002) 9:390-397
RP		MCKENDRY, R. et al., "Multiple label-free biodetection and quantitative DNA-binding assays on a nanomechanical cantilever array," PNAS (2002) 99(15):9783-9788
AD		NISHIDA, S. et al., "Combination of AFM with an objective-type total internal reflection fluorescence microscope (TIRFM) for nanomanipulation of single cells," Ultramicroscopy (2002) 91:269-274
EP		OAK RIDGE NATIONAL LABORATORY, "Finding New Uses for Carbon Nanofibers," ORNL Review (2002) 35(3), retrieved from the Internet: http://www.ornl.gov/info/ornlreview/v35_3_02/improving.shtml (XP-002377196)
RD		PEREIRA, R., "Atomic force microscopy as a novel pharmacological tool," Biochem. Pharma (2001) 62:975-983
CD		VO-DINH, T. et al., "Antibody-based nanoprobe for measurement of a fluorescent analyte in a single cell," Nature Biotech. (2000) 18:764-767
CE		WU, G. et al., "Origin of nanomechanical cantilever motion generated from biomolecular interactions," PNAS (2001) 98(4):1560-1564

Examiner Signature		Date Considered	12/10/01
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Sheet 1 of 1

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First named Inventor	Eric Henderson
Group Art Unit	1641
Examiner name	Unknown Lam
Attorney Docket Number	016348-9048-US00

U.S. Patent Documents

Examiner Initials		U.S. Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document
<i>CH</i>		6,395,562	Hammock et al.	5/28/2002
<i>CH</i>		2001/044106	Henderson et al.	11/22/2001
<i>CH</i>		2002/164656	Hoeffler et al.	11/7/2002
<i>CH</i>		2003/0228695	Nakamura et al.	12/11/2003

FOREIGN PATENT DOCUMENTS

Examiner Initials	Country Code	Foreign Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document	Translation	English Abstract
<i>CH</i>	EP	1063287	Karube et al.	12/27/2000		
<i>CH</i>	WO	02/31183	Bioforce Laboratory, Inc.	4/18/2002		

Examiner Signature	<i>CH</i>	Date Considered	12/10/06
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